

GP-300849

## FUNCTIONAL VISUALIZATION OF SPREADSHEETS

## ABSTRACT OF THE DISCLOSURE

A method for providing a functional visualization of a spreadsheet. The method includes correlating spreadsheet cells with both data entities and calculation entities in an influence diagram, and then automatically updating the entities in the influence diagram in response to changes made to the spreadsheet, or automatically updating the spreadsheet in response to changes made to the entities in the influence diagram. The method includes identifying one or more cells in a spreadsheet as a data cell or a calculation cell, and then identifying corresponding data entities and calculation entities in the influence diagram. The entities in the influence diagram can have predetermined attributes (color, shape, images, etc.) depending on their function. Next, the method includes positioning the entities in the influence diagram by employing user interaction to configure the entities in a visually pleasing manner, or positioning the entities by employing an automatic design layout algorithm to determine the configuration of the entities. Once the equivalent influence diagram is generated for the particular spreadsheet, the method detects any change in the cells of the spreadsheet or any change in the entities of the influence diagram, and then updates the entities in the influence diagram or the spreadsheet corresponding to the detected change in the spreadsheet or influence diagram to maintain a functional equivalence between the spreadsheet and influence diagram.